

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1. (currently amended) An upper spindle shaft A spindle assembly, comprising:  
a spindle having a spindle bore; and  
an upper spindle shaft having an upper section [[;]], a lower section [[;]], and [[,]]  
an undercut section, located between said upper section and said lower section,  
said upper spindle shaft located at least partially within said spindle bore and capable  
of rotating with respect to said spindle.
2. (currently amended) The spindle assembly of claim 1, further comprising  
a [[A]] spindle shaft set comprising the said upper spindle shaft of claim 1,  
said lower section comprising a threaded spindle shaft receptacle,  
and further comprising  
a probe pin having a first end and a second end distal to said first end that  
comprises  
a probe knob with a support ledge at said first end and  
probe threads vicinal to said second end,  
said probe threads capable of being screwed into said threaded spindle  
shaft receptacle.
3. (currently amended) The spindle shaft set-assembly of claim 2,  
said threaded spindle shaft receptacle comprising a receptacle end wall,  
said probe pin further comprising a depth stop,  
said depth stop extending from said probe threads to said second end of said

probe pin, and

    said second end of said probe pin contacting said receptacle end wall when said probe threads are screwed into said threaded spindle shaft receptacle.

4. (canceled)
5. (currently amended) The spindle assembly of claim [[4]] 1,  
    further comprising a spindle stop connected with said upper spindle shaft,  
    said spindle stop capable of limiting axial motion of said upper spindle shaft relative  
    to said spindle ~~when said upper spindle shaft is inserted into said spindle bore.~~
6. (original) The spindle assembly of claim 5,  
    further comprising,  
        a probe pin capable of being inserted into said spindle bore and  
        a shaft stop connected with said probe pin,  
        said shaft stop capable of limiting axial motion of said probe pin relative to said  
        spindle when said probe pin is inserted into said spindle bore, and  
        said probe pin capable of being connected with said upper spindle shaft.
7. (original) The spindle assembly of claim 6,  
    said spindle being in contact with said upper spindle shaft and said probe pin over less  
    than about 50% of a length of said spindle bore, when said upper spindle shaft and said probe pin  
    are inserted into said spindle bore and said upper spindle shaft and said probe pin are connected  
    with each other.
8. (original) The spindle assembly of claim 7,  
    said spindle being in contact with said upper spindle shaft and said probe pin over less

than about 30% of a length of said spindle bore, when said upper spindle shaft and said probe pin are inserted into said spindle bore and said upper spindle shaft and said probe pin are connected with each other.

9. (original) The spindle assembly of claim 8,

    said spindle being in contact with said upper spindle shaft and said probe pin over from about 20% to about 25% of a length of said spindle bore, when said upper spindle shaft and said probe pin are inserted into said spindle bore and said upper spindle shaft and said probe pin are connected with each other.

10. (currently amended) The spindle assembly of claim [[4]] 1, further comprising a locking collar fixable to said upper spindle shaft.

11. (currently amended) The spindle assembly of claim [[4]] 1,  
    said spindle further comprising a spindle body and a nose.

12. (original) The spindle assembly of claim 11,

    said spindle body comprising a body bore, and  
    said spindle body being in contact with said upper section and said lower section of said upper spindle shaft over less than about 60% of a length of said body bore, when said upper spindle shaft is inserted into said body bore.

13. (original) The spindle assembly of claim 12,

    said spindle body being in contact with said upper section and said lower section of said upper spindle shaft over less than about 45% of a length of said body bore, when said upper spindle shaft is inserted into said body bore.

14. (original) The spindle assembly of claim 13,

    said spindle body being in contact with said upper section and said lower section of said upper spindle shaft over about 40% of a length of said body bore, when said upper spindle shaft is inserted into said body bore.

15. (currently amended) A spindle assembly, comprising:

a spindle; and

a probe pin, comprising[[[:]]] a first end [[;]] , a second end distal to said first end [[;]],  
a probe knob with a support ledge at said first end [[;]] , and [[,]] a depth stop,  
said probe pin capable of rotating with respect to said spindle.

16. (currently amended) The spindle assembly probe pin of claim 15,

said probe pin further comprising probe threads vicinal to said second end, said depth stop extending from said probe threads to said second end.

17. (currently amended) The spindle assembly of claim 16, further comprising

[[A]] a spindle shaft set comprising the said probe pin of claim 16,  
and further comprising

    an upper spindle shaft, comprising a threaded spindle shaft receptacle with a receptacle end wall,

    said probe threads capable of being screwed into said threaded spindle shaft receptacle, and

    said second end of said probe pin contacting said receptacle end wall when said probe threads are screwed into said threaded spindle shaft receptacle.

18. (currently amended) The spindle shaft set assembly of claim 17,

    said upper spindle shaft further comprising

an upper section,  
a lower section, and  
an undercut section located between said upper section and said lower section.

19. (currently amended) The A-spindle assembly comprising the spindle shaft set of claim 17,

~~and further comprising:~~

[[a]] said spindle comprising a spindle bore; and  
said probe pin and said upper spindle shaft capable of being inserted into said spindle bore.

20. (original) The spindle assembly of claim 19,

    further comprising a spindle stop connected with said upper spindle shaft,  
    said spindle stop capable of limiting axial motion of said upper spindle shaft relative to said spindle when said upper spindle shaft is inserted into said spindle bore.

21. (original) The spindle assembly of claim 19, further comprising  
    a locking collar capable of being affixed to said upper spindle shaft and  
    capable of limiting axial motion of said upper spindle shaft relative to said spindle when said upper spindle shaft is inserted into said spindle bore.

22. (currently amended) The spindle assembly of claim 19:

    said spindle further comprising a spindle body and a nose;  
    said spindle body comprising a threaded body receptacle;  
    said nose comprising nose threads; and,  
    said nose threads capable of being screwed into said threaded body receptacle.

23. (original) The spindle assembly of claim 22,  
said nose threads being of an opposite handedness than said probe threads.

24. (currently amended) A spindle assembly comprising the said probe pin of claim 16,  
and further comprising:  
an upper spindle shaft, comprising an upper section, a lower section, and an  
undercut section, said undercut section located between said upper section and said lower  
section;  
said lower section of said upper spindle shaft further comprising a threaded spindle  
shaft receptacle with a receptacle end wall, said probe threads capable of being screwed into said  
threaded spindle shaft receptacle, and said second end of said probe pin contacting said  
receptacle end wall when said probe threads are screwed into said threaded spindle shaft  
receptacle;  
a spindle comprising a spindle bore, said probe pin and said upper spindle shaft  
capable of being inserted into said spindle bore; and,  
a locking collar capable of being affixed to said upper spindle shaft.

25. (original) The spindle assembly of claim 24:  
said spindle comprising a spindle body and a nose;  
said spindle body comprising a threaded body receptacle;  
said nose comprising nose threads;  
said nose threads capable of being screwed into said threaded body receptacle; and,  
said nose threads being of an opposite handedness than said probe threads.

26. (currently amended) A method for assembling a spindle assembly, comprising the steps of:  
providing an upper spindle shaft, comprising an upper section, a lower section, and an

undercut section;

providing a spindle comprising a spindle bore; and,

inserting said upper spindle shaft into said spindle bore so that said upper spindle shaft can rotate with respect to said spindle.

27. (original) The method of claim 26, further comprising the steps of:

providing a locking collar; and,

affixing said locking collar to said upper spindle shaft.

28. (original) The method of claim 26, further comprising the steps of:

providing a spindle body comprising a threaded body receptacle;

providing a nose comprising nose threads; and,

screwing said nose threads into said threaded body receptacle to form said spindle.

29. (original) A method for assembling a spindle assembly, comprising the steps of:

providing a probe pin comprising a probe knob with a support ledge at a first end, probe threads vicinal to a second end distal to said first end, and a depth stop extending from said probe threads to said second end;

providing an upper spindle shaft comprising a threaded spindle shaft receptacle with a receptacle end wall;

providing a spindle comprising a spindle bore;

inserting said probe pin and said upper spindle shaft into said spindle bore; and, screwing said probe threads into said threaded spindle shaft receptacle.

30. (original) The method of claim 29, further comprising the steps of:

providing a locking collar comprising a collar bore; and,

affixing said locking collar to said upper spindle shaft.

31. (original) The method of claim 30, wherein said providing a spindle comprises  
providing a spindle body;

providing a nose;

connecting said nose with said spindle body to form said spindle.

32. (original) The method of claim 30, further comprising the steps of:

providing a positioning jig comprising a support shoulder and an insertion pin  
connected with said support shoulder;

inserting said insertion pin into said collar bore of said locking collar so that said  
support shoulder contacts said locking collar; and,

inserting said upper spindle shaft into said collar bore so that said upper spindle shaft  
contacts said insertion pin.

33. (new) The spindle assembly of claim 15, wherein said probe pin, said probe knob, and said  
support ledge are formed as a single piece.